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Data Acquisition System for Forecasting Applications of Photovoltaic Power Production

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Photovoltaic power production is dependent on atmospheric factors that change rapidly. Therefore a weather monitoring system is required to better observer modifications that can alter the power production of a PV power plant. This paper proposes a low-cost data acquisition system constructed with the help of a Raspberry Pi. Additional sensors included are BME280 for temperature, humidity and pressure monitoring, a fisheye camera for all-sky imaging and a low-cost SDR system user for satellite imagery acquisition. The presented study is used only for the data acquisition part of the forecasting methodology.

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